To: Mullin, Michelle[Mullin.Michelle@epa.gov]

Cc: Piplic, Devlin[piplicd@monroe.wednet.edu]; Ramanauskas,

Peter[ramanauskas.peter@epa.gov]; Moore, Kendall[moore.kendall@epa.gov]; Peachey,

Robert[peachey.robert@epa.gov]; Skadowski, Suzanne[Skadowski.Suzanne@epa.gov]; Bernard, Nancy (DOH)[Nancy.Bernard@doh.wa.gov]; Amanda Zych[azych@snohd.org]; Jeff Ketchel[jketchel@snohd.org]

From: Mannix, John

Sent: Thur 6/9/2016 9:45:19 PM

Subject: Re: Epoxy PCB encapsulant research

..... Ms. Mullin,

Thank you for this information. Given that today was the agreed upon deadline for submitting the Technical Specifications that we intend to utilize for the remediation of the PCB caulk at Sky Valley, I did include three epoxy encapsulants that PBS Environmental located on U.S. EPA's website. I will have the CIH and our Project Manager at PBS Environmental double check those materials against this new information provided.

Regards,

John Mannix Assistant Superintendent for Operations

200 E. Fremont Street Monroe, WA 98272 (360) 804-2579

Monroe Public Schools provides an outstanding education that results in all students having a passion for learning.

On Thu, Jun 9, 2016 at 2:24 PM, Mullin, Michelle < Mullin.Michelle@epa.gov > wrote:

Hello Mr. Mannix-

I wanted to get back with you regarding your question about EPA research on encapsulant products.

The EPA Office of Research and Development (ORD) complete research on this topic in 2010. In general, epoxy coatings that were tested had the best performance in the research.

Here is a link to the research fact sheet on encapsulation: https://www.epa.gov/sites/production/files/2015-08/documents/pcb encapsulation fs.pdf

Here is a link the research report with more details: $\underline{\text{https://www.epa.gov/sites/production/files/2015-08/documents/p100fa5l.pdf}}$

You can see on pages 8 and 13 of the report that "Epoxy- no solvent" performed the best of the three tested epoxies. The "Epoxy- low VOC" performed the most poorly of the three epoxies, which was still significantly better than the other sealants tested.

For best performance to control migration of PCBs, the no-solvent Epoxy is recommended.

 Please let me know if you have any further questions.

Sincerely,

Michelle Mullin

PCB Coordinator

US EPA Region 10

1200 6th Avenue |Suite 900 | AWT-150

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